

## **AMENDMENTS TO THE CLAIMS**

### **Claim 1 (previously presented)**

A colloidal dispersion, in an organic solvent, of microfibrils and/or microcrystal of a fibrillar organic substance selected from the group consisting of cellulose, chitin, and polysaccharides containing in addition at least one compound possessing a hydrophilic part and a hydrophobic part.

### **Claim 2 (currently amended)**

A dispersion of claim 1, wherein the compound possessing a hydrophilic part and a hydrophobic part is selected from the group consisting of surfactant, a stabilizing polymer, a co-surfactant and mixtures thereof, ~~especially~~ and a mixture of surfactant and co-surfactant.

### **Claim 3 (previously presented)**

A dispersion of claim 1 of microfibrils and/or microcrystals of cellulose.

### **Claim 4 (currently amended)**

A dispersion of claim 1 wherein the organic solvent has a dielectric constant that is less than or equal to approximately 37.5, and/or ~~in that~~ the organic solvent is selected from the group consisting of

- aliphatic hydrocarbons,
- aromatic hydrocarbons,
- chlorine-containing solvents,

- ketones having 3 to 10 carbon atoms,
- polymerizable vinylic compounds,
- epoxides,
- primary, secondary or tertiary amines,
- alkyl acetates having 1 to 10 carbon atoms,
- ethers with an alkyl chain having of 1 to 20 carbon atoms or an aromatic chain,
- aldehydes, carboxylic acids and/or their acylated derivatives and anhydrides, the polyacids with an alkyl chain having ~~from about~~ 1 to ~~about~~ 20 carbon atoms or an aromatic chain,
- primary, secondary or tertiary alcohols, with aliphatic chain of 1 to 10 carbon atoms, and/or aromatic chain,
- tetrahydrofuran (THF), pyridine, dimethylformamide, (DMF), dimethylacetamide (DMAc),
- mineral and/or organic oils, of synthetic or natural origin, or mixtures thereof.

**Claim 5 (previously presented)**

A dispersion of claim 1 wherein the quantity of cellulose varies from about 0.01 wt % to about 50 wt % relative to the total weight of the dispersion.

**Claim 6 (previously presented)**

A dispersion of claim 1 wherein the compound possessing a hydrophilic or hydrophobic part is:

- (a) a surfactant possessing:
- a hydrophilic part capable of being adsorbed on the microfibrils and/or microcrystals of the compound selected from the group consisting of cellulose, chitin and polysaccharides and containing oxyethylene groups,
  - a hydrophobic part, containing a carbon chain of at least 6 carbon atoms, aromatic or non-aromatic, and capable of interacting with the solvent,
- the said surfactant being selected from the group consisting of
- cationic surfactants,
  - anionic surfactants,
  - amphoteric surfactants possessing a quaternary ammonium group and an anionic phosphoric group, and
  - neutral surfactants,
- (b) or, a stabilizing polymer possessing from about 5 to about 200 hydrophilic units and from about 10 to about 200 hydrophobic units.

**Claim 7 (currently amended)**

A dispersion of claim 1 ~~2~~ wherein the co-surfactant possesses:

- a hydrophilic part that is compatible with the hydrophilic part of the compound possessing a hydrophilic part and a hydrophobic part, and
- a hydrophobic part that is compatible with the hydrophobic part of the compound possessing a hydrophilic part and a hydrophobic part,

- the co-surfactant making it possible, for the microfibrils and/or microcrystals of the fibrillar organic substance as defined in claim 1 to be rendered compatible with the organic solvent,

the said co-surfactant being selected from the group consisting of alcohols having 4 to 18 carbon atoms, carboxylic acids having 4 to 18 carbon atoms, aldehydes having from 4 to 18 carbon atoms or amines having from 4 to 18 carbon atoms.

**Claim 8 (currently amended)**

A dispersion of claim 1 containing:

- cellulose microfibrils and/or microcrystals, in a quantity varying from about 0.01 wt % to about 50 wt % relative to the total weight of the dispersion,

- an organic solvent in a quantity varying from about 50 wt % to about 99.9 wt % relative to the total weight of the dispersion,

- a surfactant in a quantity varying from about 0.01 wt % to about 50 wt % relative to the total weight of the dispersion,

- and optionally a co-surfactant in a quantity varying from about 0 wt % to about 20 wt % relative to the total weight of the dispersion.

**Claim 9 (previously submitted)**

A dispersion of claim 1 wherein it exhibits at least one of the following properties:

- it does not form aggregates (it is non-flocculent),
- it is birefringent in shear, and
- it is stable for periods ranging from at least one minute to at least 12 months.

**Claim 10** (previously presented)

A method of preparation of a dispersion of claim 1 comprising:

(1) forming an aqueous dispersion of microfibrils and/or microcrystals of a fibrillar organic substance selected from the group consisting of cellulose, chitin, and polysaccharide with a compound possessing a hydrophilic part and a hydrophobic part selected from the group consisting of a surfactant, a stabilizing polymer, a co-surfactant or mixtures thereof,

(2) removing the water from the aqueous dispersion as obtained in the preceding stage to obtain a dry mixture of surfactant and/or of stabilizing polymer and optionally co-surfactant, and a fibrillar organic substance selected from the group consisting of cellulose, chitin, and polysaccharides,

(3) and dispersing the mixture as obtained in the preceding stage in an organic solvent.

**Claim 11** (currently amended)

The method of preparation of claim 10, wherein

(1) an aqueous dispersion of microfibrils and/or microcrystals of cellulose is mixed with a surfactant selected from the group consisting of BNA,

polyoxyethylene sorbitan trioleate and didecydimethyl ammonium bromide, the weight ratio between the said surfactant ~~(a)~~ and ~~(b)~~ and said microfibrils and/or microcrystals of cellulose varying from about 0.1:1 to about 20:1, to obtain an aqueous colloidal dispersion of microfibrils and/or of microcrystals of cellulose,

(2) the water is eliminated from the aqueous dispersion as obtained in the preceding stage to obtain a dry mixture of surfactant and cellulose, the said mixture containing from about 5 wt % to about 95 wt % of surfactant relative to the total weight of the mixture, and from about 5 wt % to about 95 wt % of cellulose relative to the total weight of the mixture,

(3) the mixture as obtained in the preceding state is dispersed in an organic solvent as defined in claim 4, until a dispersion of cellulose microfibrils and/or microcrystals is obtained for which the percentage by weight of adsorption between the said surfactant and the said cellulose microfibrils and/or microcrystals varies from about 0.1 to about 20.

**Claim 12** (cancelled)

**Claim 13** (currently amended)

~~A thickened and/or viscous,~~ An organic solvent having a dielectric constant that is less than or equal to approximately 37.5 and/or the organic solvent is selected from the group consisting of as defined in claim 4 containing

~~microcrystals and/or microfibrils of a fibrillar organic substances selected from the group comprising cellulose, chitin and polysaccharides,~~  
~~a compound possessing a hydrophilic part and a hydrophobic part selected from the group consisting of a surfactant, a stabilizing polymer, a co-surfactant and mixtures thereof.~~

- aliphatic hydrocarbons,
- aromatic hydrocarbons,
- chlorine-containing solvents,
- ketones having 3 to 10 carbon atoms,
- polymerizable vinylic compound,
- epoxides,
- primary, secondary or tertiary amines,
- alkyl acetates having 1 to 10 carbon atoms,
- ethers with an alkyl chain having 1 to 20 carbon atoms or an aromatic chain,
- aldehydes, carboxylic acids and/or their acylated derivatives and anhydrides, the  
polyacids with an alkyl chain having 1 to 20 carbon atoms or an aromatic chain,
- primary, secondary or tertiary alcohols, with an aliphatic chain having 1 to 1-  
carbon atoms, and/or an aromatic chain,
- tetrahydrofuran (THF), pyridine, dimethylformamide (DMF),  
dimethylacetamide A(DMAc),
- mineral and/or organic oils of synthetic or natural origin,  
or mixtures thereof,

wherein it is thickened and/or viscous, and containing:

- microcrystals and/or microfibrils of a fibrillar organic substance selected from

the group consisting of cellulose, chitin, and polysaccharides,

- a compound possessing a hydrophilic part and a hydrophobic part selected from  
the group consisting of a surfactant, a stabilizing polymer, a co-surfactant and mixtures  
thereof.

**Claims 14-16 (cancelled)**

**Claim 17 (previously presented)**

A colloidal dispersion of claim 1 wherein the polysaccharide is selected from the group consisting of  $\beta$  1  $\rightarrow$  3 glucan,  $\beta$  1  $\rightarrow$  3 xylan and  $\beta$  1  $\rightarrow$  4 mannan.

**Claim 18 (previously presented)**

A colloidal dispersion of claim 2 wherein the compound possessing a hydrophilic part and a hydrophobic part is a mixture of surfactant and co-surfactant.

**Claim 19 (previously presented)**

In a gel, liquid crystal or material containing cellulose microfibrils and/or microcrystals, the improvement comprising using an aqueous dispersion of claim 1.



**Claim 20 (currently amended)**

In a preparation of a material containing microfibrils and/or microcrystals of cellulose, the improvement comprising using a ~~dry~~ dried mixture of the composition of claim 19.